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TC 1700

Attorney's Docket No.: 10102-001001

A F/1700

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Jerold S. Horn et al.

Art Unit : 1713

Serial No. : 09/262,628

Examiner : F. Zitomer

Filed : March 4, 1999

Title : FLUOROPOLYMERIC ORTHODONTIC ARTICLE

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Commissioner for Patents

Washington, D.C. 20231

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES****REPLY BRIEF TO EXAMINER'S ANSWER**

Pursuant to 37 CFR 1.193(b)(1), Applicant responds to the Examiner's Answer as follows.

Summary of Invention

Appellants discovered that fluoroplastics, a particular class of fluoropolymers, can be used to provide orthodontic articles having improved mechanical strength as well as good resistance to stain and discoloration. Conventionally used materials such as ceramics, although high in strength and initially aesthetically pleasing, would tend to become stained and discolored after some time. In particular, ceramic orthodontic materials could discolor from exposure to foods having high pigment content, such as berries or tomato based sauces.

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April 17, 2003

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Orthodontic articles made from fluoroplastics can maintain high translucency. This appearance is aesthetically pleasing, as the articles allow the natural tooth color to be transmitted through the article. Even in the oral environment, fluoroplastic orthodontia can maintain their translucency because of their good stain and discoloration resistance. Furthermore, the orthodontic articles made from fluoroplastic can maintain their good rigidity and load-bearing properties.

Comments

The Examiner requests a clarification of the statement regarding the grouping of the claims, particularly for claims 17-23, due to the withdrawal of certain rejections of record.¹ Appellants now group the claims as follows:

Claims 1-4, 7-8, 10, and 12-23 stand or fall together.

Argument

I. The Claims Satisfy the Requirements of 35 U.S.C. 112

Appellants insist that the instant disclosure satisfies the written description requirement of 35 U.S.C. 112. The standard for determining compliance with the written description requirement is whether the description allows a person of ordinary skill in the art to recognize that the inventor indeed invented what is claimed. *In re Hayes Microcomputer Products Inc.*, 25 U.S.P.Q. 2d 1241, 1245 (Fed. Cir. 1992), quoting *Vas-Cath Inc. v. Mahurkar*, 19 U.S.P.Q. 111, 1116 (Fed. Cir. 1991). Whether the description is sufficient, and therefore adequately describes the claimed invention, is evaluated by assessing whether the disclosure "reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter." *Id.*; See also, *In re Peters*, 221 U.S.P.Q. 952 (Fed. Cir. 1983) (reversing the Board's decision to reject the claims for failing to meet the written description requirement).

¹ The Answer withdraws the rejections under 35 U.S.C. 112, first paragraph, for scope, and 35 U.S.C. 102(b).

In the Answer, the Examiner maintains the rejection that the claims are not supported by the Appellants' description, asserting that the term "fluoroplastics" lacks support in the specification, and that the disclosure and original claims "are silent" on fluoroplastics. Appellants disagree. The lack of support and "silence" alleged by the Examiner is imprecise and erroneous, as the Examiner fails to recognize that the disclosure is sufficient to one of ordinary skill in the art. Clearly, Appellants' disclosure provides adequate information and description to a skilled artisan to understand and recognize that the claimed invention is directed to fluoroplastic articles. The specification is filled with descriptions, lists, examples, relevant test procedures and identification of commercial suppliers of fluoroplastics -- these are all recognizable and identifiable to a skilled artisan as attributed and related to fluoroplastics. Furthermore, and significantly, as described throughout the specification and depicted in the figures, the claims are directed to orthodontic articles that are mountable on a tooth and are made to withstand forces applied to correct teeth positioning. A skilled artisan would know that a fluoroelastomeric material would be undesirable for this purpose, as the article would be too stretchy and would lose its shape, rendering it non-functional for applying forces to the teeth. Appellants' disclosure reasonably conveys to one of ordinary skill in the art that Appellants indisputably intended the orthodontic articles to be made from fluoroplastic material.

Appellants request that this rejection be reversed.

II. The Claimed Invention is Non-Obvious and Complies with 35 U.S.C. 103

In the Answer, the Examiner withdraws the rejection under 35 U.S.C. 102(b) based on Hammar et al. (U.S. Patent No. 5,461,133). This concession clearly indicates that Appellants' claimed invention is unlike the elastomeric articles described in Hammar et al. The Examiner, however, maintains the rejection based on obviousness, relying on Hammar et al. in view of Pustka (U.S. Patent No. 4,323,956).

Prior art references, either solely or in combination, must suggest the desirability of a claimed invention, for an obviousness rejection to be proper. *In re Deminski* 230 USPQ 313 (Fed. Cir. 1986). A prima facie case of obviousness cannot stand, as the combination of the Hammar et al. and Pustka disclosures is deficient. By virtue of the Examiner's decision that

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Hammar et al. does not describe fluoroplastic orthodontic articles, the reference's status is now down-graded, and can no longer be relied upon as a primary reference for teaching fluoroplastics, but rather, fluoroelastomer articles. Consequently, for the obviousness rejection to be proper, there must be some disclosure in Hammar et al. to suggest to a skilled artisan that the fluoroelastomer can be, and would desirably be, replaced by fluoroplastic polymers. No such disclosure exists. Nor does it exist in Pustka, a reference that indeed discloses fluoroplastics, but only in the context of light fixture closure articles (e.g. windows, lenses, etc.), a class of articles not even remotely related to orthodontia. The suggestion of a desirability to provide fluoroplastic orthodontia is absent in Pustka.

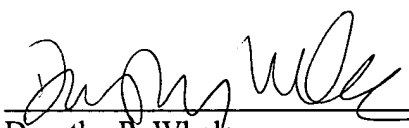
A skilled artisan within the field of orthodontics surely would not look to light fixture art to modify orthodontic articles or find new materials for the articles. Pustka and Hammar et al., therefore are not properly combinable. Accordingly, the claims are non-obvious over Hammar et al. and Pustka.

For these reasons, and the reasons stated in the Appeal Brief, Applicant submits that the final rejection should be reversed.

Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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